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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,602	01/24/2002	Ronald Hugh Miller	201-0783 FAM	9335

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KEVIN G. MIERZWA
ARTZ & ARTZ, P.C.
28333 TELEGRAPH ROAD, SUITE 250
SOUTHFIELD, MI 48034

EXAMINER

MANCHO, RONNIE M

ART UNIT	PAPER NUMBER
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3663

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/683,602

Applicant(s)

MILLER ET AL.

Examiner

Ronnie Mancho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2&3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1, 2, 14, 21 are objected to because of the following informalities:

In claim 1, line 8, the examiner suggests that "an communication link" be written as -- a communication link -- for clarity.

In claim 2, the applicant is advised to make the necessary grammatical correction for clarity.

In claim 14, line 3, the applicant is advised to change "vehicle a plurality" to --vehicle and a plurality--. In line 4, "vehicle a communication" to --vehicle using a communication-- for clarity.

In claim 21, the applicant is advised to change the limitation "a system for sensing a potential collision of a first vehicle with a second vehicle that transmits a second vehicle information signal" to ---a system for sensing a potential collision of a first vehicle with a second vehicle, *wherein the second vehicle* transmits a second vehicle information signal--- for clarity.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 1, line 6, "said high frequency signal" lacks antecedent basis.

Claims 2-13 are rejected for depending on rejected claim 1.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Lemelson et al (5983161).

Regarding claim 1, Lemelson et al (abstract, fig. 1) disclose a method for operating a pre-crash sensing system, a counter-measure system, for a first vehicle proximate a second vehicle comprising:

generating an object detection signal (Lidar/Radar; col. 18, lines 44-51) over a field of view from a first vehicle (col. 17, lines 19-62);

receiving the object detection signal at the second vehicle when positioned within the field of view (col. 17, lines 19-62);

generating a response signal in response to said object detection signal (col. 17, lines 19-62), said response signal including a key (CDMA, etc; col. 18, lines 30-43);

establishing an communication link between said first vehicle and said second vehicle using said key (CDMA, etc; col. 18, lines 30-43);

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communicating a first vehicle data signal (i.e. position; col. 17, lines 19-62) to the second vehicle using said key (CDMA, etc; col. 18, lines 30-43); and

communicating a second vehicle data signal (position, velocity, etc; col. 17, lines 19-62) to the second vehicle using said key (CDMA, etc; col. 18, lines 30-43).

Regarding claim 2, (as best understood), Lemelson et al (abstract, figs. 13-15; col. 27, lines 24-67) disclose the method as recited in claim 1 wherein the first vehicle information is entered into the second vehicle threat registry and wherein the first vehicle information is classified or ranked within the registry.

Regarding claim 3, (as best understood), Lemelson et al (abstract, figs. 13-15; col. 27, lines 24-67) disclose the method as recited in claim 2 wherein classifying comprises classifying the first vehicle information as an imminent threat.

Regarding claim 4, (as best understood), Lemelson et al (abstract, figs. 13-15; col. 27, lines 24-67) disclose the method as recited in claim 3 further comprising allocating a system resource in response to the imminent threat.

Regarding claim 5, Lemelson et al (abstract, figs. 13-15; col. 27, lines 24-67) disclose the method as recited in claim 1 further comprising communicating the second vehicle threat registry to a third vehicle adjacent to the second vehicle.

Regarding claim 6, Lemelson et al (abstract) disclose the method as recited in claim 1 wherein communicating a first vehicle data signal comprises communicating a first position of the first vehicle.

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Regarding claim 7, Lemelson et al (abstract) disclose the method as recited in claim 1 wherein communicating a second vehicle data signal comprises communicating a second position of the second vehicle.

Regarding claim 8, Lemelson et al (abstract) disclose the method as recited in claim 1 wherein communicating a first vehicle data signal comprises communicating a first heading information of the first vehicle.

Regarding claim 9, Lemelson et al (abstract) disclose the method as recited in claim 1 wherein communicating a second vehicle data signal comprises communicating second heading information (col. 17, lines 62-67) of the second vehicle.

Regarding claim 10, Lemelson et al disclose the method as recited in claim 1 wherein communicating a first vehicle data signal comprises communicating first trajectory information of the first vehicle to the second vehicle (col. 17, lines 62-67).

Regarding claim 11, Lemelson et al (abstract, figs. 13-15; col. 27, lines 24-67) disclose the method as recited in claim 1 further comprising classifying a threat level as a function of the first vehicle trajectory.

Regarding claim 12, Lemelson et al disclose the method as recited in claim further comprising activating a counter-measure system (col. 20, lines 8-20) in response to the threat level.

Regarding claim 13, Lemelson et al disclose the method as recited in claim 1 wherein said vehicle information comprises heading and speed (see GPS).

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Regarding claim 14, Lemelson et al (abstract, fig. 1) disclose a method for operating a pre-crash sensing system, a counter-measure system, for a first vehicle proximate a second vehicle comprising:

establishing a communication link (col. 17, lines 19-62) between said first vehicle a plurality of vehicles a communication key (CDMA, etc; col. 18, lines 30-43);

communicating a vehicle data to the first vehicle from the plurality of vehicles (col. 17, lines 19-62); and

entering the vehicle data into the first vehicle threat registry (figs. 13-15; col. 25, lines 7-67);

ranking the vehicle data by vehicle within the registry in one of a plurality of classes (figs. 13-15; col. 25, lines 7-67).

Regarding claim 15, Lemelson et al (abstract, fig. 1) disclose the method as recited in claim 14 further comprising ranking some as the vehicle data as an imminent threat registry (figs. 13-15; col. 25, lines 7-67).

Regarding claim 16, Lemelson et al (abstract, fig. 1) disclose the method as recited in claim 14 further comprising allocating a system resource in response to the imminent threat.

Regarding claim 17, Lemelson et al (abstract, fig. 1) disclose the method as recited in claim 14 further comprising estimating a time to impact.

Regarding claim 18, Lemelson et al (abstract, fig. 1) disclose the method as recited in claim 14 further comprising activating an avoidance countermeasure when the time to impact is greater than a time threshold.

Regarding claim 19, Lemelson et al (abstract, fig. 1) disclose the method as recited in claim 14 further comprising activating an impact countermeasure when the time to impact is less than a time threshold.

Regarding claim 20, Lemelson et al (abstract, fig. 1) disclose the method as recited in claim 14 wherein generating a vehicle data signal comprises generating a vehicle type signal, a vehicle weight signal or *a vehicle size signal*.

Regarding claim 21, (as best understood), Lemelson et al (abstract, fig. 1) disclose a system for sensing a potential collision of a first vehicle with a second vehicle, wherein the second vehicle transmits a second vehicle information signal, said first vehicle having a pre-crash sensing system comprising:

- a threat registry (FAM 204, col. 25, lines 1-67);

- a position sensor (GPS 32, fig. 1; col. 19, lines 44-50) generating a first position signal corresponding to a position of the first vehicle;

- a first sensor (transceiver 30, fig. 3; col. 19, lines 30-42) generating sensor signals from the first vehicle;

- a receiver (transceiver 30, fig. 3; col. 19, lines 30-42) receiving the second vehicle position signal from the second vehicle;

- a countermeasure system (214, 216; fig. 9; col. 24, lines 33-44; col. 25, lines 19-25);

- a controller 200 (col. 24, lines 56 to col. 25, lines 1-6) coupled to the threat registry (FAM 204. Note that 204 is part of 38; col. 24, lines 56-58), the position sensor 32, the first sensor 30, the receiver 30, and said counter measure system (214, 216; fig. 9; col. 24, lines 33-44; col. 25, lines 19-25), said controller 200 determining a time to collision (note that time is

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computed from acceleration, velocity or distance as indicated by the applicant) and a distance to collision (i.e. distance to hazard; col. 25, lines 26-35; col. 27, lines 30-37) in response to the second vehicle information, the first position signal and the second vehicle position (note that distance to hazard embraces the distance computed between position of first vehicle and position of second vehicle), said controller 200 determining a threat level (col. 24, lines 56 to col. 25, lines 1-6; col. 25, lines 28-39; col. 27, lines 25-41) as a function of the time to collision and the distance to collision (see kinematics tracking; col. 34, lines 53-64, etc), activating the countermeasure system in response to the threat level (col. 24, lines 33-44; col. 25, lines 16-25) and storing the vehicle and threat level in the threat registry (FAM; col. 25, lines 7-53).

Regarding claim 22, (as best understood), Lemelson et al (abstract, fig. 1) disclose the system as recited in claim 21 wherein said controller 200 comprises system resources, said controller allocating system resources in response to said threat level.

Regarding claim 23, (as best understood), Lemelson et al (abstract, fig. 1) disclose the system as recited in claim 21 wherein said counter measure system comprises avoidance countermeasures and mitigation countermeasures (214, 216; fig. 9; col. 24, lines 33-44; col. 25, lines 19-25), said controller 200 choosing to activate said avoidance countermeasures or mitigation countermeasures in response to said threat level.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following: 5471214, 6097332, 20020005778, and 6420996 all disclose a vehicle control system.

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Communication

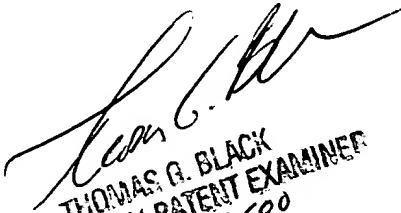
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 703-305-6318. The examiner can normally be reached on Mon-Thurs: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Black can be reached on 703-305-8233. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Ronnie Mancho
Examiner
Art Unit 3663

September 3, 2003


THOMAS G. BLACK
SUPERVISORY PATENT EXAMINER
GROUP 2600